

Operator's Manual

Deployable Universal Combat Earthmover (DEUCE)

30/30 (Model DV100)

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Foreword

Literature Information

This manual should be stored in the operator's compartment. Store the manual in the pamphlet bag, which is provided as a Basic Issue Item (BII), or in the literature storage area on the back side of the operator's seat.

This manual contains safety, operation, transportation, lubrication, and maintenance information suitable for the Army operator.

Guards and covers may have been removed for illustrative purposes. Read, study and keep this manual with the machine.

Whenever a question arises regarding your machine, or this publication, please consult U.S. Army Tank-Automotive and Armaments Command (TACOM), your Caterpillar dealer, or Caterpillar Defense and Federal Products for the latest available information.

Safety

The Safety section lists basic safety precautions. In addition, this section identifies the text and locations of the warning signs and labels used on the machine.

Read and understand the basic precautions listed in the Safety section before operating or performing any lubrication, maintenance or repair on this machine.

Operation

The Operation information is a reference for the new operator and a refresher for the experienced one. This section includes a discussion of gauges, switches, machine controls, attachment controls, transportation, and towing information.

Photographs and illustrations guide the operator through the correct procedures for checking, starting, operating and stopping the machine.

Maintenance

The maintenance information is a guide to equipment care for Army operators. The illustrated, step-by-step instructions are grouped by servicing intervals. Items without specific intervals are listed under the When Required topics. Items in the Maintenance Intervals chart (refer to "Maintenance Section, Maintenance Intervals" in this manual) are referenced to detailed instructions that follow.

Maintenance Interval Schedule

Use the service hour meter to determine the servicing intervals. Calendar intervals shown (daily, weekly, monthly, etc.) can be used instead of the service hour meter intervals, if they provide more convenient servicing schedules and approximate the indicated service hour meter reading. Recommended service should always be performed at the interval that occurs first.

Under extremely severe, dusty or wet operating conditions, more frequent lubrication than is specified in the Maintenance Intervals chart might be necessary.

Perform service on items at multiples of the original requirement. For example, at Every 50 Service Hours or Weekly, also service those items listed under Every 10 Service Hours or Daily.

Machine Description



The Deployable Universal Combat Earthmover (DEUCE) is an earthmoving machine capable of travelling between sites at high speed. The DEUCE is equipped with a 3126 HEUI (Hydraulic Electronic Unit Injector) engine that operates at two power levels, 197 kW (265 hp) and 138 kW (185 hp). The machine is equipped with a power/angle/tilt (PAT) blade and a winch. The suspension on the machine can be activated for smooth operation at high speed, or locked, for a stable base when dozing.

California

Proposition 65 Warning

Diesel engine exhaust, and some of its constituents, are known to the state of California to cause cancer, birth defects, and other reproductive harm.

Important Safety Information

Most accidents involving product operation, maintenance and repair are caused by failure to observe basic safety rules or precautions. An accident can often be avoided by recognizing potentially hazardous situations before an accident occurs. A person must be alert to potential hazards. This person should also have the necessary training, skills and tools to perform these functions properly.

Improper operation, lubrication, maintenance or repair of this product can be dangerous and could result in injury or death.

Do not operate or perform any lubrication, maintenance or repair on this product, until you have read and understood the operation, lubrication, maintenance and repair information.

Safety precautions and warnings are provided in this manual and on the product. If these hazard warnings are not heeded, bodily injury or death could occur to you or other persons.

The hazards are identified by the "Safety Alert Symbol" and followed by a "Signal Word" such as "WARNING" as shown below.



The meaning of this safety alert symbol is as follows:

The message that appears under the warning, explaining the hazard can be either written or pictorially presented.

Attention! Become Alert! Your Safety is Involved

NOTICE

Operations that may cause product damage are identified by NOTICE labels on the product and in this publication.

Caterpillar cannot anticipate every possible circumstance that might involve a potential hazard. The warnings in this publication and on the product are therefore not all inclusive. If a tool, procedure, work method or operating technique not specifically recommended by Caterpillar is used, you must satisfy yourself that it is safe for you and others. You should also ensure that the product will not be damaged or made unsafe by the operation, lubrication, maintenance or repair procedures you choose.

The information, specifications, and illustrations in this publication are on the basis of information available at the time it was written. The specifications, torques, pressures, measurements, adjustments, illustrations, and other items can change at any time. These changes can affect the service given to the product. Obtain the complete and most current information before starting any job. TACOM and Caterpillar dealers will have the most current information available. For a list of the most current publication form numbers available, see the Caterpillar Service Manual contents Microfiche, REG1139F.

Safety

Warning Labels

There are several specific warning labels on this machine. The exact location of each label and a description of the hazard are reviewed in this section. Please review the location and content of each warning label.

NOTE: The warning labels on the radiator and engine valve cover are not accessible to the operator.

Make sure all warning labels can be read. Clean or have the warning labels replaced if the words cannot be read, or the illustrations are not clear. When cleaning the warning labels, use a cloth, water, and soap. Do not use solvent, gasoline, etc., to clean the warning labels. Solvents or gasoline, etc., could loosen the label adhesive and allow the sign to fall off.

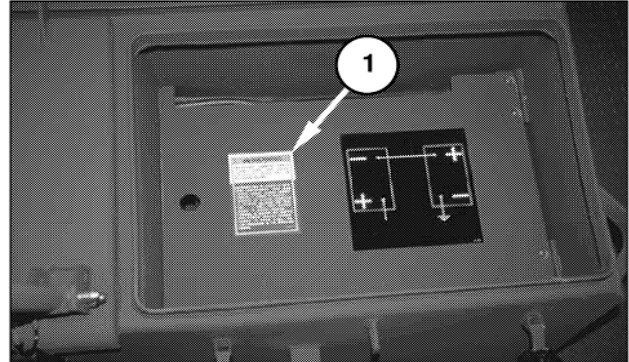
If a warning label is attached to a part that is replaced, make sure a new label is installed on the replaced part. Unit maintenances should refer to the following group numbers in *Parts Manual, Deployable Universal Combat Earthmover (DEUCE)* for the part numbers of the warning labels and data plates:

- 1004943 Cover GP-Valve Mechanism
- 1228811 Paint GP-Transfer
- 1243842 Cylinder GP & Mounting (Front)
- 1243847 Cylinder GP & Mounting (Bogie)
- 1450425 Cab GP-Basic
- 1520463 Wiring GP & Battery (Optional Arctic)

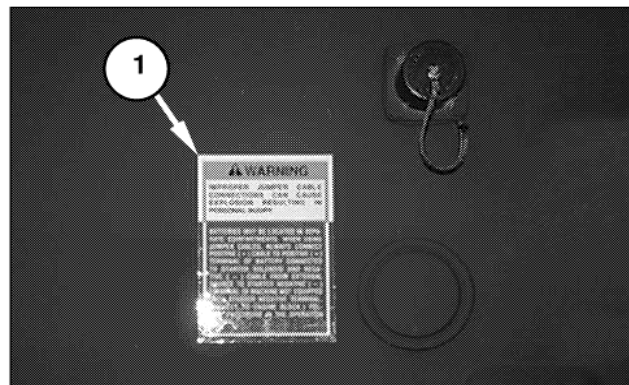


Improper jumper cable connections can cause explosion, resulting in personal injury.

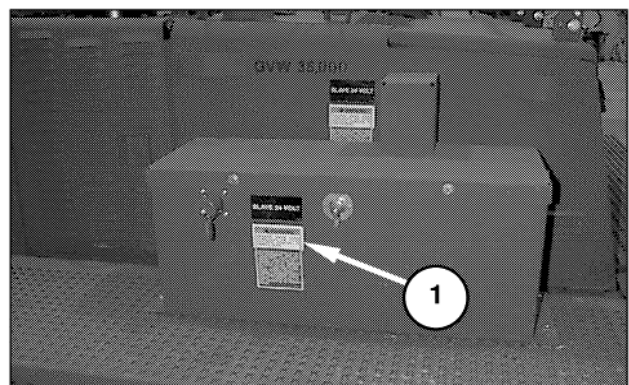
Batteries may be located in separate compartments. When using jumper cables, always connect positive (+) cable to positive (+) terminal of battery connected to starter solenoid and negative (-) cable from external source to starter negative (-) terminal. (If machine not equipped with starter negative terminal, connect to engine block.) Follow procedure in the operation manual.



Warning label (1) is located inside the battery Compartment, at the rear of the machine



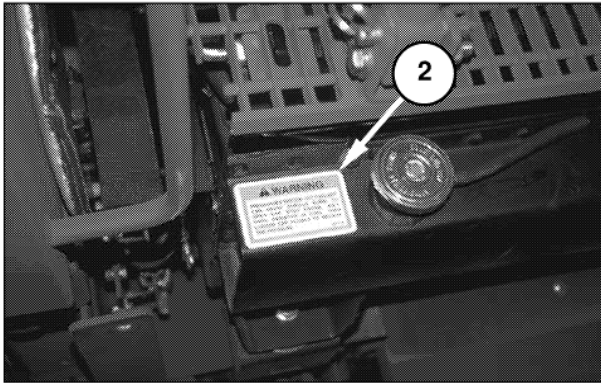
A second copy of the warning label (1) is located on the left side of the machine, towards the rear, near the auxiliary start receptacle (NATO slave).



A third copy of the warning label (1) is located on the arctic battery box, if the machine is equipped with the arctic battery option.

WARNING

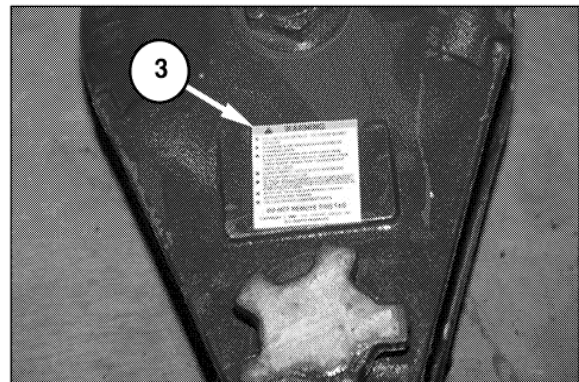
Pressurized system: hot coolant can cause serious burn. To open cap, stop engine, wait until radiator is cool, then loosen cap slowly to relieve the pressure.



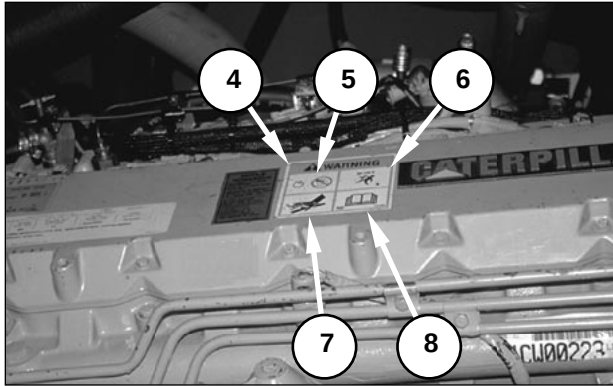
Warning label (2) is located on the radiator, near the cap.

WARNING

- If a load slips or falls—you can be injured or killed.
- Always be alert when around moving or overhead loads.
- Always keep hands and body away from block sheaves and swivels—and away from “pinch points” where rope touches block parts.
- Always inspect tackle block system and parts before each use.
- See OSHA rule 1926 550(G) for personnel hoisting for cranes and derricks. Only a Crosby or McKissick Hook with a PL latch attached and secured with the bolt, nut and cotter pin provided, may be used. For any personnel hoisting, a hook with or without a Crosby Ss-4055 Latch attached shall not be used for personnel hoisting.
- Never use tackle block without proper instruction and training.
- Only use proper component parts.



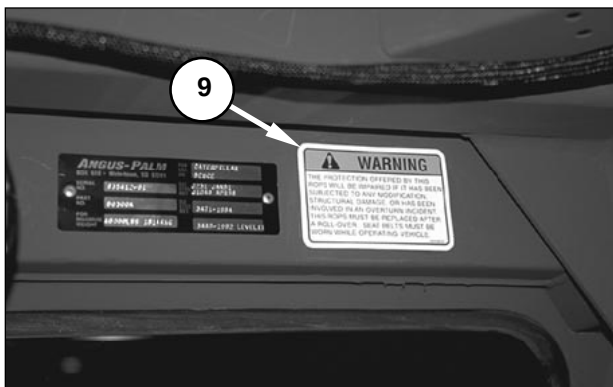
Warning label (3) is located on the winch doubling block.



Warning label (4) is located on the engine valve cover. This warning label is a four-quadrant graphic label. Quadrant (5) warns against injecting ether into the air intake system. Quadrant (6) warns of an electrical shock hazard. Quadrant (7) warns that damaged high-pressure oil lines can cause injury. Quadrant (8) directs personnel to read the service manual before performing service on the engine.

WARNING

The protection offered by this ROPS will be impaired if it has been subjected to any modification, structural damage, or has been involved in an overturn incident. This ROPS must be replaced after a roll-over. Seat belts must be worn while operating vehicle.



Warning label (9) is located on the top right corner of the cab, inside the operator's compartment.

NOTE: ROPS is the acronym for Rollover Protective Structure.

WARNING

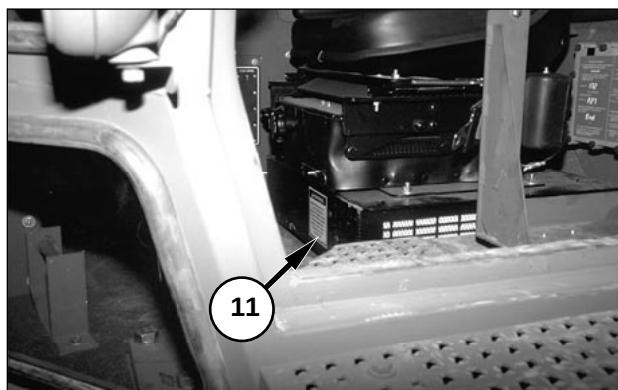
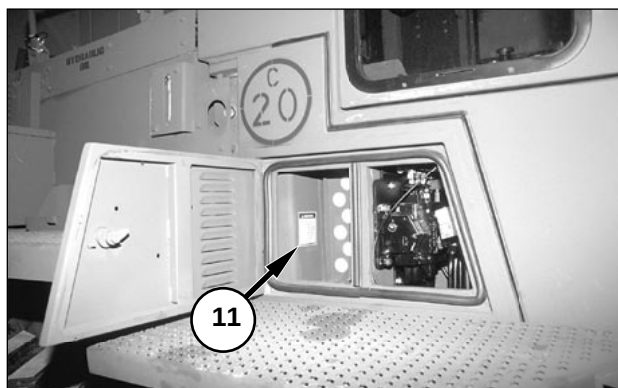
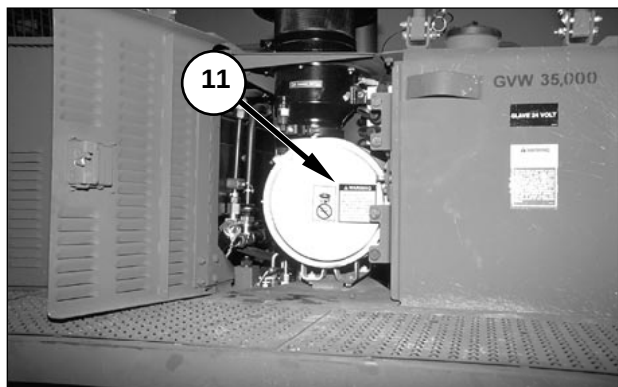
Do not operate or work in this machine unless you have read and understand the instructions and warnings in the operation and maintenance manuals. Failure to follow the instructions or heed the warnings could result in injury or death. Contact any Caterpillar dealer for replacement manuals. Proper care is your responsibility.



Warning label (10) is located on the console to the right of the operator's seat.

! WARNING

If NBC exposure is suspected all air filter media will be handled by personnel wearing full NBC protective equipment. See operator maintenance manuals. Failure to comply could result in serious illness or death.



Warning label (11) is located at all air filter locations.

NOTE: NBC is an acronym for nuclear, biological, or chemical.

! WARNING

High intensity noise. Hearing protection required within 33 feet when operating.



Warning label (12) is located on the left side of the machine, to the rear of the cab door.